

Claims

- [c1] 1. A turbine or compressor device comprising:
- a rotor (1) including a first rotor section (2) having at least one disc-shaped or annular element (3) which has a multiplicity of blades (4) arranged in series on a circumferential path for guiding a gas flow, and a second, elongate rotor section (5), which projects at right-angles from the rotor disc (3) and which comprises a rotor shaft (6) connected to the rotor disc;
- a first and second bearing (8,9) fitted at a distance from one another along the rotor shaft (6), the first bearing (8) being arranged closer to the rotor disc (3) than the second bearing (9) and wherein a bearing holder (25) of the first bearing (8) has a greater outside width than other components (9,14,15,31) arranged on the rotor shaft (6) between the first bearing (8) and the free end of the rotor shaft (7);
- a stator (26) having a first stator housing part (11) arranged in a position proximate to the rotor disc (3), the first stator housing part being configured to be placed and fixed in position in a direction away from a free end (7) of the rotor shaft (6).

- [c2] 2. The device as recited in claim 1, wherein the bearing holder (25) of the first bearing (8) and the second, elongate rotor section (5), including the other components (9,14,15,31), has a width gradually diminishing towards the free end (7) of the rotor shaft (6).
- [c3] 3. The device as recited in claim 1, wherein the first stator housing part (11) comprises a duct (17) configured for the passage of gas from the blades (4) of the rotor disc (3).
- [c4] 4. The device as recited in claim 1, wherein the stator (26) comprises a fixed part (10) arranged between the first stator housing part (11) and the rotor disc (3), and to which the first stator housing part is connected.
- [c5] 5. The device as recited in claim 4, wherein the fixed part (10) comprises means (12) for connection to the first stator housing part (11) in the direction away from the free end (7) of the rotor shaft (6).
- [c6] 6. The device as recited in claim 3, wherein the means of connection (12) is arranged radially inside the gas duct (17).
- [c7] 7. The device as recited in claim 5, wherein the means of connection (12) has a threaded opening.

- [c8] 8. The device as recited in claim 4, wherein the fixed part (10) comprises a section that forms the bearing holder (25) for the first bearing (8).
- [c9] 9. The device as recited in claim 1, wherein the stator (26) comprises a second stator housing part (21) arranged on an opposite side of the first stator housing part (11) to the rotor disc (3) and the second stator housing part configured for connection to the first stator housing part.
- [c10] 10. The device as recited in claim 9, wherein the second stator housing part (21) forms a bearing housing for the first bearing (8) and the second bearing (9).
- [c11] 11. A method for assembling a turbine or compressor device that comprises a rotor (1) and a stator (26), and in which the rotor comprises a first rotor section (2) having at least one disc-shaped or annular element (3) with a multiplicity of blades (4) arranged in series on a circumferential path for guiding a gas flow, and a rotor shaft (6) projecting at right-angles from the disc, two bearings (8,9), and any other components being arranged around the rotor shaft (6), and the rotor then balanced, said method comprising:
bringing the first stator housing part from the free end (7) of the rotor shaft in towards the rotor disc after a

balancing of the first stator housing part (11) of the stator (26) is affected by arrangement around the rotor shaft (6) in a position in proximity to the rotor disc (3) through a relative movement between the first stator housing part and the rotor shaft.

[c12] 12. The method as recited in claim 11, further comprising arranging a fixed part (10) intended for the first stator housing part (11) around the rotor shaft (6) in proximity to the rotor disc (3) before the first stator housing part (11) is fitted, and in conjunction therewith, placing the first stator housing part (11) in the intended position for fastening to the fixed part.

[c13] 13. The method as recited in claim 12, further comprising fastening the first stator housing part (11) to the fixed part (10) in a direction away from the free end (7) of the rotor shaft (6).

[c14] 14. The method as recited in claim 11, further comprising, after arrangement of the first stator housing part (11) in the intended position, a second stator housing part (21) is arranged around the rotor shaft (6) through a relative movement between the second stator housing part and the rotor shaft so that the second stator housing part is brought from the free end (7) of the rotor shaft in towards the first stator housing part.

- [c15] 15. The method as recited in claim 14, further comprising the second stator housing part (21) being fastened to the first stator housing part (11) in a direction away from the free end (7) of the rotor shaft (6).
- [c16] 16. The method as recited in claim 11, further comprising each of the bearings (8,9) being arranged around the rotor shaft (6) through a relative movement between the rotor shaft and each bearing, so that the bearing is brought from the free end (7) of the rotor shaft and in towards the rotor disc (3) into a respective bearing position.